



PROGRESS REPORT
ON THE
QUAIL MANAGEMENT PLAN
FOR
THE CEDARS PLANTATION
AVALON, MISSOURI
BY
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INTRODUCTION

In the spring of 1998 we drafted an intensive Quail Management Plan for our 320-acre farm known as The Cedars Plantation near Avalon, MO (Exhibit 1). Work began immediately to implement the plan and continues today. The purpose of this Progress Report is to:

- ☐ Quantify what has been accomplished
- ☐ Evaluate the results
- ☐ Consider revisions
- ☐ Share our results with others
- ☐ Draft an action plan for the intermediate-term future
- ☐ Provide supplemental information for our entry in the
Budweiser/Quail Unlimited 2006 ADOPT A COVEY PROGRAM

Wildlife management, like most everything, is an adaptive process of planning, execution, evaluation and adjustment. In this report we will carefully examine the agriculture, the habitat, the Bobwhite population and the quality of the hunting...all in the context of our original expectations. We will report what has worked and what has not. Finally, we will modify our future plans, if necessary, accordingly.

AGRICULTURE

Our original objective was to maintain a viable agricultural operation as we improved the habitat for Bobwhite quail. This was important as we were (and still are) using the farm income to retire the mortgage. We recognized that as CRP had become available, we had simply traded large crop fields for large grass fields. We were convinced there had been no improvement in diversity and little, if any, increase in Bobwhite numbers.

Our plan was to balance the amount of CRP and cropland through future CRP sign-ups to achieve the diversity that quail need. The vision was to embed smaller crop fields within the existing large CRP areas, using soil and topography information to optimize the transition; that is, to return only the best ground to cultivation.

We were fortunate to be able to execute this part of the plan perfectly. We participated in CRP sign-ups 16, 18 and 26 to achieve a much better balance. In 1997, we had 47 acres of crop and 202 acres of CRP (19%-81%). Today, having followed the plan, we have 111 acres of crop and 137 acres of CRP (45%-55%). We could not achieve the goal of 50-50 without farming some steeper slopes or unreasonably small fields. Most of the new crop fields are small in terms of modern agricultural norms and are juxtapositioned to provide that “patchwork” effect that quail managers favor.

All new fields have a minimum of 66’ CRP borders around them. In all cases we plant the 16’ (6 rows) adjacent to the crop fields and leave it standing as a food strip for wildlife. We compensate our farmer for his direct inputs and tillage on the CRP food strips and for his lost income on the traditional crop fields. The Missouri Department of Conservation (MDC) has a program (LAWS), partnered with QU, that compensates landowners for leaving standing crops, but for several reasons, it does not work for us.

Our FSA farm plan calls for a crop rotation of corn/soybeans, alternating annually. We prepare and follow a cropping plan (Exhibit 8) that provides additional diversity by planting adjacent fields in different crops.

Our farmer frequently takes soil samples in order to optimize his use of fertilizers. He also plants Roundup-Ready soybeans and Liberty corn so he can use the safest herbicides. We allow no fall work and request minimum spring tillage.

In summary, we are pleased with the agricultural portion of our plan and feel we have achieved all of our objectives. The only possible change under consideration is to enroll the borders of the original crop fields Nos. 5, 6 and 7 in the Bobwhite Buffers CP-33 Continuous CRP program.

HABITAT

Our Quail Management Plan charted a course for a transition to an optimum balance on the farm of cropland and high quality habitat for Bobwhite quail. The plan also called for intensive management of the land after the balance was in place, in order provide ideal conditions for the birds. We were able to take advantage of CRP sign-ups 16, 18 and 26, one WHIP contract and a lot of hard work to achieve our objectives. In this section of the progress report we will examine what has been accomplished and how it is working. We will examine three general habitat classifications; grasses, woody cover and wildlife food.

Grasses

In 1997 the farm was dominated by large, unmanaged CRP grass fields (202 acres). Field No. 1 (74 acres) had been enrolled by the previous owners in one of the earliest sign-ups (1988) and was mostly in Tall Fescue. The balance of the CRP (128 acres) was enrolled in the 11th CRP sign-up at our request just prior to the purchase in 1991. It included several former highly erobible crop fields that were seeded to a combination of Cool Season Grass/Legume and Native Warm Season Grass mixtures. We had future rotational cattle grazing in mind, rather than quail at that time. There were no management actions required by CRP then, and as a result the stands had become thick/rank monocultures with little value to quail...perhaps even less value than the crop fields they replaced.

The management plan was put in place in 1998 and our first opportunity to make changes was the 16th CRP sign-up that year. The 10-year contract on Field No. 1 had expired so following the plan, we designed an offering that returned 24 acres of the most suited (best soil and topography) ground to cropland. We retained the balance in CRP and converted the existing Fescue to a quail-friendly Cool Season/Legume mixture (Orchardgrass, Timothy, Red Clover and Korean Lespedeza). In the design process we divided the property into 10-acre (660' x 660') planning "grid blocks" (Exhibit 7) since we wanted to be sure all habitat types (grass, woody cover and feed) were available within close proximity. We were careful to insure that each block ended up with at least one acre of grass, ½ acre of feed and one thicket. Field borders of at least 66 feet were incorporated in the final layout.

In 2000 we took advantage of the 18th CRP sign-up to enroll 7 acres at the southwest corner of bottom Field No. 6. This section of the field rose steeply to the adjacent hill ground. This gave us an opportunity to put a little grass in the midst of a large expanse of neighboring cropland. We seeded the area to a Native Warm Season mixture (Big bluestem, Eastern Gamma Grass, Sideoats Grama and lespedeza).

Also in 2000, we carried out habitat improvements by means of a WHIP contract. WHIP contracts were available on farmland that was not enrolled in other programs such as CRP. This limited us to three traditional crop fields and our two small pastures, both in Fescue. Under this contract we converted Field No. 18 (7.3 acres) to a cool season/legume mix (Orchardgrass, timothy, red clover and Kobe lespedeza) and over seeded Field No. 19 (11.5 acres) with lespedeza. This contract also provided cost share for future disking of Field No. 19 to promote the emergence of annual weeds and forbs, which has worked very well.

There were no general CRP sign-ups in 2001 or 2002 and our 1991 CRP contract was simply extended each year. We were not able to make any more progress on the habitat transition prescribed by the plan until the 26th CRP sign-up was announced in 2003. Once again, using our strategy to return the areas of best soil and topography to cropland while monitoring the 10-acre grid blocks for local diversity, we were able to reduce the amount of CRP and increase the cropland by 48.0 acres. The grass stands seeded in 1991, having been maintained since the onset of the plan in 1998, were in excellent shape and did not require renovation to comply. As mentioned in the section on agriculture, the overall balance between CRP and cropland had been improved to 55%-45%, very near our goal of 50-50. The proportion of warm season grass to cool season/legume mix now stands at 62%-38% (Exhibit 9).

In accordance with the plan, we manage our grasslands intensively in order to provide the diversity of structure required by quail for nesting, brood rearing, loafing, roosting, etc. We accomplish this by a combination of burning and light disking. We have drafted a prescribed burn plan (Exhibit 10), by which we burn 1/3 of our grassland each year. The burns in any year are strategically distributed in patchwork fashion across the farm. In addition, in our thickest stands of grass, we lightly disc 50% of the area that has been burned. Following this concept, we actually have six successional stages of grass on the landscape at all times. The burns are timed to achieve

specific results within each field according to its condition...that is we may want to promote either the grasses or annual weeds and forbs. Generally speaking, we burn Native Warm Season grass prior to March 15 and Cool Season grass as late as possible.

We have learned a lot about the mechanics of carrying out a safe burn. We disc bare ground firebreaks in the fall around the fields we intend to burn the following spring. Just prior to each burn, we mow a “heat reduction strip” inside the disked fire lane for additional safety. We have discovered that ATV-mounted water tanks with wand spray attachments and two-way radios are valuable pieces of equipment, in addition to the drip-torches and rakes we borrow from NRCS. We avoid burning when the weather forecast calls for low humidity or high winds.

We have recently experimented with some strip applications of herbicide (Roundup) in the Fescue in pasture Field No. 19 in order to set it back and provide some bare ground and annual weed growth. Finally, in late winter each year we broadcast lespedeza in strategic areas, particularly on the fire lanes and other areas where we have recently disked.

In general, we are pleased with the quantity and quality of the grasslands that have evolved according to our plan. We have observed some Little Bluestem mixtures planted on other properties and are impressed with the structure. In the future we will probably favor this specie over the taller Big Bluestem and Indiangrass. We are noticing the return of Tall Fescue to Fields Nos. 1 and 18 that were converted under the plan to Orchardgrass/Timothy/legume mixtures. We will need to monitor this closely and take corrective action if necessary. We are considering improving the balance between NWSG and CSG mixtures to near 50-50. This could be accomplished by converting portions of Field Nos. 1 and 2 to NWSG. Finally, we will expand the use of strip herbicide applications, particularly in the thicker cool season stands.

Woody Cover

Our Quail Management Plan identified that lack of hard-core woody cover was the most limiting factor for quail on the property. The plan called for:

- ☐ Identifying and maintaining existing good examples of woody cover
- ☐ Renovating existing mature woods woody draws and hedgerows that offered little escape cover
- ☐ Planting new quail-friendly trees and shrubs along field borders, along draws and in thickets

Our efforts to date have mainly involved planting new seedlings. We have taken advantage of CRP sign-ups 16 and 26 and a WHIP contract to provide valuable cost share (50%). We have also planted many trees and shrubs on our own.

In 1998 and 1999 (CRP sign-up 16) we planted two acres of trees and shrubs - one field border and one draw - in Field No. 1. These bare-root seedlings were purchased from the state nursery and were planted, after a Roundup “burn down,” with a tractor mounted tree planter borrowed from MDC. Plant spacing was generally in rows 5’ apart with a 5’ spacing within the rows...this is as close as we can get them using the mechanical tree planter.

We also planted a number of “thickets” around the farm in 1998 and 1999, particularly in the grid blocks that otherwise had no woody cover. These thickets were designed as 66’ circular areas surrounding man-made brush piles. We planted approximately 100 shrubs in each “ring-around”...so called because we could easily disc a fire lane around them in the years that field was to be burned. These shrubs, also obtained from the state nursery, were planted by hand using “dibble bars.” Planting was in circular rings, 3’ apart with 3’ spacing within the rings.

In 2000 and 2001, we participated in a WHIP contract that provided cost share for establishing an additional 4 acres of trees and shrubs. These were planted as a one-acre thicket in the eroding northwest corner of traditional crop field No. 5, along the draw in pasture Field No. 18 and as a field border and along two draws in pasture Field No. 19.

In 2002 the Missouri Department of Conservation announced the availability of their “Quail Cover Bundle” (QCB) from the state nursery. The bundle

consisted of 50 bare-root seedlings, 10 each of 5 different quail-friendly species. We were disappointed with the condition of our tree and shrub development to date and offered to conduct a structured evaluation of the QCB for the Department. The evaluation was designed to test various ground treatments, species, spacings and maintenance techniques. We hand planted twelve bare-root seedling test plots (25' x 50'), three container seedling test plots (50' x 50') and an additional acre of machine-planted seedlings in a 25' wide strip along a draw in Field No. 1. The evaluation is on going at this time. A post-graduate botanist at the University of Missouri, who was conducting similar research on QCB's, learned of our project and asked if she could have some space at The Cedars to expand her study. We were happy to cooperate and in 2003 she planted her complex. The Evaluation Plan is included with this report (Section 5).

In 2003 the 26th CRP general sign-up was announced...the first in three years. This sign-up had some features that were particularly good for those of us who were serious about quail habitat. Under our offering in this sign-up, we planted an additional 7.6 acres of trees and shrubs according to the CP-4D practice. These were generally planted in 33' wide strips as field borders and along draws as well as in a few thickets or "Covey Headquarters" in Field Nos. 2, 2A, 3, 7A, 8 and 10.

In terms of quantity, we have achieved our goals with respect to woody cover establishment (Exhibit 11). In terms of quality, we are disappointed! We have planted more than 25,000 trees and shrubs representing a variety of quail-friendly species – Osage orange, American (wild) plum, rough-leaved dogwood, gray dogwood, silky dogwood, hazelnut, fragrant sumac, shrub lespedeza, false indigo, coral berry (buck brush) and blackberry. We frequently check the vitality of our tree and shrub plantings and are pleased with survival rates of 75% to near 100%. Unfortunately, it is fair to say today, that not one of our plantings has yet to reach the dense structure necessary to provide the hard-core cover we are seeking. We had hoped that we could achieve "covey headquarters" quality in five years, but that has not been the case. One of our biggest problems has been the predation by rabbits and deer. It is unbelievable how many seedlings are clipped by these critters...nearly 100% in some of our "ring-around" plantings. The plants do not die, rather they remain in "dwarf" stature for several years until they become thick enough that they are no longer attractive to the critters. We are beginning to see some of this now and hope we will have dense woody fencerows, brushy draws and thickets soon. We have found that a few

species are spared by rabbits and deer; false indigo, fragrant sumac and shrub lespedeza. Of these, shrub lespedeza seems to provide the best year-round structure. Unfortunately the MDC nursery has discontinued this specie, as it is not native. We are having discussions with MDC's quail biologists and foresters in an effort to have them reconsider.

In our early plantings, we realized better survival rates with hand-planted seedlings than with those planted with the mechanical planter. As we became more experienced, the difference in survival has become negligible. We have found that careful ground preparation is the key. We spray (Roundup) and disc future planting strips in the fall to achieve an ideal planting bed for the following spring. We are careful not to plant when the ground is too wet, as the furrow-closer cannot properly backfill around the bare roots.

We have experimented with several types of weed and grass control in our tree and shrub plantings. In our earliest efforts, we sprayed a broad-spectrum...grass and broadleaf...pre-emergent herbicide (Princep) prior to planting. In the following years, we sprayed over the top with both Princep and Poast, a post-emergent chemical that controls grass only. These treatments have been moderately successful, but are expensive and time-consuming using an ATV-mounted spray tank with boom attachment. In our latest plantings (26th sign-up), we experimented with broadcasting a lespedeza cover crop in the shrub strips. We are very pleased so far. The low-growing lespedeza out competes the grasses and weeds, but does not over-story and shade the seedlings. We will continue to monitor the results, but at this point, we believe it is the most effective practice.

As previously stated, our initial efforts to improve the woody cover on the farm have almost totally involved planting new seedlings. Beginning in 2004, and continuing in 2005, we began to try a practice known as "edge feathering." The results have been nothing short of phenomenal! Using this technique, a landowner can instantly provide "covey headquarters" structure, rather than waiting 8 to 10 years for bare root seedlings to mature. Lack of hard-core woody escape cover and over-wintering habitat is still the limiting factor at the Cedars Plantation. We have concluded that we would have been much farther along now, if we had started edge feathering early in the process. Edge feathering and mature woody draw/hedgerow renovation is our highest priority at the present time (Exhibit 12).

Wildlife Food

Following the plan, we provide food for quail in several ways:

- ☐ Insects
- ☐ Annual weed seeds
- ☐ Waste grain
- ☐ Crops strips
- ☐ Food plots

Literature and managers consistently report that there is a period during the year when insects are the most important source of food for Bobwhites. This is especially true during the nesting and early brood-rearing season.

Research conducted in north Missouri by MDC (Tom Dailey) and MU (Wes Burger) in the 1990's concluded that cool season grass/legume fields...particularly those with a high proportion of red clover...hosted the highest compliment of insects. We have resisted converting entirely to Native Warm Season grass mixtures, as some biologists have recommended, in order to maintain attractive habitat for the protein-rich insects.

As stated in the discussion on our grasslands, we intensively manage them by burning, light disking and strip herbicide applications in order to provide bare ground and to promote annual weed/forb growth. The bare ground provides accessibility to the nutritious weed seeds available to the birds for several months during the year. In addition, we broadcast several hundred pounds of Korean or Kobe lespedeza, albeit in somewhat random fashion, each year to provide an additional food source.

In order to maximize the amount of waste grain available to wildlife after harvest, we ask our farmer not to do any fall tillage. Although improved plant genetics and harvest machinery efficiency have combined to reduce the amount of grain left behind, our 111 acres of row crop land no doubt provide a great deal of energy-rich food for the birds during the winter.

We have an arrangement with our farmer whereby he leaves the outer-most 6 rows (16') of crop standing in all fields. In traditional crop field Nos. 5, 6 and 7, we compensate him for his lost revenue...for example 100 bushels of corn per acre at \$2.00 per bushel or \$200 per acre. We have 3.0 acres of field edge in these traditional crop fields. The edges (16') of the new crop fields carved out of former CRP actually remain in CRP and (more than) satisfy

our food plot requirement. Our farmer plants these edges along with the field and does not harvest them. We compensate him for his inputs (fertilizer, herbicide and seed) and machinery (field cultivation, spraying and planting). We have 7.2 acres of food strips in the new crop fields.

In the planning process, we identified twelve grid blocks that did not include any cropland. In each of these grid blocks we have established a ½ acre food plot (66' x 330'). We plant alternating halves of each plot annually, leaving the other half fallow. We have tried a number of crops...MDC food plot mix, corn, soybeans, milo, Egyptian wheat and sunflowers. We have settled on a 50-50 mixture of grain sorghum and forage sorghum. The forage sorghum grows quite tall and remains out of reach of the deer that consume a high proportion of the low growing feeds. We have also experimented with various doses and kinds of herbicides and fertilizers. It is our opinion that, while you can get by without either, your investment in seed and time is better served if you apply moderate amounts of each. We are currently spraying 2 1/2 quarts per acre of Bicep II Magnum (Atrazine and Dual) and fertilizing with 75 pounds per acre of nitrogen (Ammonium Nitrate or Urea).

Our Food Plot Plan is included as Exhibit 13.

BOBWHITE POPULATION

The Bobwhite population goal established in the management plan was one bird per acre. In order to simplify boundaries, we “borrow” twenty acres from each of two neighbors to square up the management area at $\frac{3}{4}$ mile by $\frac{3}{4}$ mile or 360 acres (Exhibit 3). Therefore, in absolute terms, our objective population is 360 birds or 36 coveys averaging ten birds per covey.

Having read several research papers on estimating quail populations, we adopted a system whereby we count the number of coveys we find during the first hunt on each course and then apply a multiplier to arrive at the estimated number of coveys on the area. Most research indicates that two-man, two-dog teams find 40% of the birds...indicating a 2.5 multiplier. We frequently use three dogs, so we have decided to use a conservative multiplier of 2.0 in our calculations.

In addition to the “first hunt” procedure, we also conduct whistling cock counts each spring. We have determined that the Saturday closest to the first of June is the time when we record the maximum number of whistling cocks. In all honesty, we do not see much correlation between the number of whistling cocks heard in the spring and the number of coveys we find in the fall (see table below).

Starting in 2000 we have tried to conduct fall “morning covey call” counts. The protocol requires the recorder to be positioned in the center of a 60-acre survey area and then record the number of coveys that sound off to greet the day. Having only one or two surveyors, we have had a number of problems collecting accurate data. We believe it would take a sizable crew, covering adjacent areas simultaneously, to collect meaningful data with this survey method.

Based on our early hunting experience, we believed we had 11 coveys on the place during the 1997 season. In order to reach our goal of 36 coveys, we needed to grow the population at a 26% rate compounded annually.

The following is a summary of the estimated population growth:

<u>Year</u>	<u>Planned No. Coveys</u>	<u>Whistling Cocks</u>	<u>Estimated No. Coveys</u>
1997	11		11
1998	14	20	14
1999	18	24	22
2000	23	13	22
2001	29	17	24
2002	36	27	24
2003	36	22	24
2004	36	25	24
2005	36	24	28

Our expectation was to reach the objective population in five years or by the year 2002. Obviously we did not achieve that mark, but we are not discouraged. One of our hunters speculated that we might be closer to the goal than we think. He submitted that if we surveyed on November 1st, applied a 2.5 multiplier to coveys found or assumed 12 birds per covey, we would be right on the threshold.

We believe there have been two major barriers to reaching our goal of 36 coveys. First, there were no general CRP sign-ups in 2001 and 2002 and that precluded us from going forward with our habitat improvement plans on a large portion of the farm until 2003. Second, lack of hard-core woody cover is still the most important factor limiting our Bobwhite populations, as we have been unable to create new “covey headquarters” quality habitat in timely fashion by planting bare-root seedlings. We had a nice jump in population in 2005 and we attribute that to the edge feathering work we accomplished the previous two years. Expanding that practice is our highest priority and we are more confident than ever that we will achieve the objective population of one bird per acre.

HUNTING

The prospect of good hunting was our incentive to draft and implement our intensive quail management plan. The plan articulated rather complex harvest goals and strategies. Simply stated, we planned to harvest up to 20% of the estimated population during the establishment period and then 30% after the target population of one bird per acre (360 birds) is reached.

We have actually hunted the property less than the plan anticipated and unfortunately, for a variety of reasons, have not kept detailed hunting logs. During the period from 1998 to 2004, as we were trying to grow the population, we hunted the property from three to five times each year...usually two hunters with two or three bird dogs for two to three hours. Typically we would find coveys at a rate of 1 to 1.5 per hour, harvesting from 2 to 4 birds per covey, 6 to 12 per hunt and 20 (1998) to 50 (2004) birds per season. Our best shooters would frequently bag a limit of 8.

In the 2005-6 season, sensing we were approaching the target population, we resolved to implement a detailed recording system. We had an excellent year and are pleased to share the following results:

<u>Hunt Number</u>	<u>No. of Hunters</u>	<u>Hours Hunted</u>	<u>Coveys Found</u>	<u>Birds Bagged</u>	<u>Cripples Lost</u>
1	3	2.5	5	12	1
2	2	2.5	6	12	1
3	2	2.5	7	8	2
4	3	3.5	9	18	3
5	2	1.5	3	4	0

The following statistics can be extracted from the above data:

- ☐ 12 hunter trips
- ☐ 12.5 hours hunted
- ☐ 31 gun hours
- ☐ 30 coveys found
- ☐ 61 birds bagged and lost
- ☐ 2.4 coveys found per hour hunted
- ☐ 1 covey found per 24 minutes hunted
- ☐ 12.2 birds bagged/lost per hunt
- ☐ 2 birds bagged/lost per gun hour
- ☐ 2 birds bagged per covey found

We are elated with these results! The plan set forth objectives only in terms of harvest quantity...i.e. number of birds harvested. Looking back, we should have declared our expectations with respect to the quality of the hunting...say coveys found per hour. It is impossible to speculate where we would have set the mark, but I can't believe it would have been more than the two coveys per hour or one covey per 30 minutes that we exceeded this year.

Based on the estimated population of 280 birds, and a harvest of 61 this year, we took slightly more than the 20% suggested by the plan during the establishment period. We have shared these results with several quail managers who say we could be harvesting at a higher rate without having a detrimental affect on the breeding population next spring. We believe them; and will no doubt step up our efforts, most likely with more hunting trips...starting earlier. Although Missouri's quail season opens November 1, we have not been conducting our first hunt until after Thanksgiving. We have noticed that the number of birds we find is in inverse proportion to the frequency of the hunts. I am absolutely convinced that we could hunt a course three days in a row, and without shooting one bird, find six coveys on day one, find three coveys on day two and find none on day three. The birds are very adaptable and as we provide more and better hard-core cover, they find it when necessary. There has been some interesting research conducted at Ames Plantation where the best bird dogs on the planet find an unbelievably low percentage of radio-marked Bobwhites during championship field trials.

Since 2003, we have tried to broaden our hunting opportunities by planting a patch of sunflowers to attract mourning doves. We selected the smallest crop area in Field No. 2 (approximately 1.5 acres) and have had only moderate success. We are struggling to find the right timing and combination of fertilizer, herbicide, seed variety and planting rate that result in a weed-free field with sunflowers that mature in time for dove season. I'm sure we'll get there.

An unexpected bonus from our habitat work has been the increase in the number of wild turkeys on the farm. In the planning process we consciously said we would make habitat changes with only quail in mind, even if it legislated against our turkeys. Obviously the turkeys have benefited from our work, as the population has never been higher. Last spring John and his guests bagged 8 mature toms on the property!

Again, we are very pleased with the quality of the hunting and the size of the bag. We believe that both will improve as we get more woody cover on the landscape...particularly on the northeast course. Unfortunately we do not have much opportunity for featheredging on that course, so we will have to wait for the seedlings in the field borders, along the draws and in the thickets to mature. Most of these were planted in 1998 and 1999, so it might not be long. We are considering cutting pin oaks from other areas on the farm and placing them in loose configurations on this course to simulate the edge-feathered effect. We are confident that in a few years we will be comfortable harvesting 100 birds annually.

SHARING RESULTS

Another objective of our plan is to share what we learn with others. We are pleased that we have been able to do so on several fronts:

- ☐ Provided interviews to *Missouri Conservationist* and *Progressive Farmer* magazine writers for articles about our project.
- ☐ Prepared and delivered a PowerPoint presentation about our work at a Missouri Natural Resource Conference and a Quail Unlimited/MDC workshop
- ☐ Hosted the Missouri Chapter of the Outdoor Writers Association of America (OWAA) on a field tour and hunt.
- ☐ Hosted NRCS conservationists on a field tour/workshop to view successful CRP practices.
- ☐ Hosted Missouri Department Conservation biologists when they fine-tuned their new Wildlife Habitat Appraisal Guide on the ground.
- ☐ Hosted one of eight regional field days in conjunction with the kick-off of Missouri's Northern Bobwhite Recovery Initiative. See Field Tour Program included in Section 6.
- ☐ Making our farm available to MDC Private Land Conservationists and Quail Unlimited Regional Directors and volunteers for use as a demonstration farm at any time.
- ☐ Serving on the Missouri Department of Conservation's Quail Leadership Council.

We are grateful to the Missouri Department of Conservation and Quail Unlimited for their technical assistance and encouragement. Tom Dailey, Bill White and Steve Fisher, all with MDC, and QU's Jef Hodges have been particularly helpful. As a result, we are anxious to help them promote sound quail management on private land.

ACTION PLAN

JANUARY

- Quail season closes...maintain detailed logs for the final hunts and prepare season summary
- Meet with farmer to collect farm rent and review cropping plan for coming year
- Order trees and shrubs for April arrival (if scheduled)
- Inventory herbicides
- Edge feather along woods and renovate woody draws and hedgerows

FEBRUARY

- Check and re-disc firebreaks if necessary around fields to be burned
- Mow heat reduction strips around fields to be burned
- Broadcast 150 to 250 pounds of lespedeza in strategic locations
- Continue edge feathering and woody draw/hedgerow renovation

MARCH

- Lightly disc 50% of Fescue pasture Field No. 19
- Burn NWSG fields prior to March 15
- Disc new tree and shrub planting strips (if scheduled)
- Mow food plots and food strips
- Take soil samples from food plots and sunflower patch
- Continue edge feathering and woody draw/hedgerow renovation
- Inventory QCB research plots and spray (Princep) scheduled
- Spray (Princep) new tree and shrub planting strips (if scheduled)

APRIL

- Burn CSG fields as late as possible
- Lightly disc 50% of burned fields
- Plant new tree and shrub seedlings (if scheduled)
- Disc food plots and sunflower patch
- Pick up (MDC) or purchase food plot and sunflower seed
- Fertilize food plots and sunflower patch

MAY

- Spray food plots (Bicep) and sunflower patch (Treflan)
- Plant sunflower patch prior to May 15
- Plant food plots after May 15
- Spray (Roundup) strips in Fescue pasture Field No. 19
- Spray (Roundup) under edge feathering
- Spray (Poast) scheduled QCB research plots

JUNE

- Conduct whistling cock survey (first Saturday)
- Mow roadsides and demonstration/hunting trails
- Cultivate sunflower patch

JULY

- Check for and spray (Roundup) noxious plants (thistle, sericea lespedeza, Johnson grass, etc.)
- Continue mowing roadsides and demonstration/hunting course trails

AUGUST

- Continue mowing roadsides and demonstration/hunting course trails
- Mow strips in sunflower patch

SEPTEMBER

- Continue mowing roadsides and demonstration/hunting course trails
- Spray (Roundup) new tree and shrub planting strips for next year (if scheduled)

OCTOBER

- Conduct morning covey call survey (third Saturday)
- Mow and disc firebreaks around scheduled spring prescribed burn fields
- Disc new tree and shrub planting strips for next year (if scheduled)

NOVEMBER

- Quail season opens...maintain detailed hunting logs

DECEMBER

- Quail season open...maintain detailed hunting logs